

METABOLISM

Clinical and Experimental

CONTENTS

No. 1

Renal Excretion of Water, Sodium and Potassium in Cirrhosis of the Liver.....	<i>Alfonso Rivera, José Carlos Pena, Carlos Bárcena, Sergio Rangel and Federico Díes</i>	1
Paper Chromatographic Pattern of Endogenous Urinary Corticosteroids in Normal Subjects.....	<i>Ludwig Kornel and S. Richardson Hill, Jr.</i>	18
Interactions of Hydrocortisone and Thyrotropin on Thyroid Secretion of Intact Dogs	<i>Norman B. Ackerman, Richmond W. Smith, Jr. and J. Martin Miller</i>	27
Factors Influencing Hemoglobin Changes Associated with Daily Infusions of Intravenous Fat Emulsions.....	<i>Quentin L. Hartwig</i>	41
Prevalence of Diabetes among Different Ethnic Jewish Groups in Israel	<i>A. M. Cohen</i>	50
Pattern of Electrolyte, Nitrogenous and Body Composition Alterations in Acute Uremic Syndrome in Nephrectomized Dogs	<i>Paul R. Schloerb</i>	59
Comparative Studies on Absorption and Metabolic Disposal of Water-Soluble Corticosteroid Esters....	<i>James C. Melby and Marlys St. Cyr</i>	75
Incorporation of Dietary Radiocalcium into Skeleton of Rats	<i>John H. Weikel, Jr. and William F. Neuman</i>	83
Preliminary Report: Utilization of Globin Peptides in Hemoglobin Synthesis in Vitro.....	<i>Henry Brown and Julie Brown</i>	91
Abstracts		94

No. 2

Studies on a Direct Effect of Insulin on the Central Nervous System: A Review.....	<i>Ole J. Rafaelsen</i>	99
Effect of Sympathetic Blockade on Changes in Blood Ketones and Non-esterified Fatty Acids following Hypoglycemia in Man	<i>Emile E. Werk, Jr., Stanley Garber and Leon J. Sholiton</i>	115
"Puberal" Hypothyroidism: Case Report and Review of the Literature	<i>Gerald Burke</i>	126
Components of Body Weight Loss in Surgical Patients	<i>Helena Gilder, Frank G. Moody, George N. Cornell and John M. Beal</i>	134
Hyponatremia Associated with Superior Vena Cava Obstruction		

<i>J. B. Dossetor, E. H. Venning and J. C. Beck</i>	149
Improvement of Adipose Tissue Insulin Bio-assay by Lengthening Incubation Time..... <i>Paul M. Beigelman and Ilarion S. Onoprienko</i>	162
Sex Difference in Rat Adipose Tissue. Metabolism <i>Kenneth W. McKerns and Renate Clynes</i>	165
Changes in Blood Ketones During Hemorrhage and Shock in the Rat <i>Walter Lyon Bloom</i>	171
Abstracts	174

No. 3

Von Recklinghausen's Disease with Massive Intra-Abdominal Tumor and Spontaneous Hypoglycemia <i>Donald M. Hayes, Charles L. Spurr, John H. Felts and Emery C. Miller, Jr.</i>	183
Massive Retroperitoneal Fibrosarcoma, Spontaneous Hypoglycemia and Generalized Splanchnomegaly: Report of a Case <i>Garfield G. Duncan and Guy L. Schless</i>	200
Renal Tubular Acidosis and Hypokalemic Muscular Paralysis: Report of a Case <i>James A. Kemp, W. Edmund Farrar, Jr. and Thomas Findley</i>	204
A Prompt Effect of Exogenous Insulin on Net Hepatic Glucose Output in Man..... <i>James W. Craig, William R. Drucker, Max Miller and Hiram Woodward, Jr.</i>	212
Clinical Evaluation of Tolcyclamide in Treatment of Diabetes Mellitus <i>Juan Jose Paullada and José Luna del Villar</i>	221
Influence of Nicotinic Acid on Starvation Hypercholesteremia in Rabbits <i>Rudolf Altschul and Terry A. Smart</i>	231
Phenethyldiguanide—Comparative Study of Tablets and Timed-Disintegration Capsules... <i>Robert S. Radding and Stanley J. Zimmerman</i>	
Clinical Effectiveness and Toxicity of Methahexamide in Treatment of Diabetes Mellitus..... <i>Isidore A. Feder and Alvin Kahn</i>	246
Effect of Induced Hyper- and Hypothyroidism upon Acute Uremic Syndrome in Nephrectomized Dogs <i>Glenn O. Bair, W. H. Tu and Paul R. Schloerb</i>	261
Abstracts	269

No. 4

Studies on the Mechanisms of Tolbutamide Hypoglycemia <i>Thomas F. Shelley, Thomas F. Frawley and Edward J. Margulies</i>	275
Site of Action of Tolbutamide in the Dog <i>Jack R. Leonards, Bernard R. Landau, James W. Craig, F. I. R. Martin, Max Miller and Frank M. Barry</i>	290
Metabolic Balance Studies in a Patient with Wilson's Disease and Hypercalcuria..... <i>M. R. Playoust and Nancy E. Dale</i>	304
Glucagon as a Regulating Factor of Plasma Lipids <i>Edward Paloyan and Paul Vincent Harper, Jr.</i>	315
The Nervous System and Lipid Metabolism of Adipose Tissue	

Part I. Influence of Denervation on Lipid Mobilization Processes, Lipid Synthesis and Lipopenia in the Interscapular Adipose Body of the Rat.	<i>C. Confalonieri, M. V. Mazzucchelli and P. Schlechter</i>	324
Part II. Influence of Denervation of the Lipogenetic Activity of Adrenocortical Hormones		
<i>M. V. Mazzucchelli, C. Confalonieri and P. Schlechter</i>		329
Preliminary Report: Adrenocorticotrophic Activity of a Synthetic Nonadecapeptide (NDP) in Man.	<i>Peter H. Forsham, Vincent C. DiRaimondo, Edward G. Biglieri, and Choh Hao Li</i>	335
Henry M. Stratton, an Anniversary Recognition, by Garfield G. Duncan		379
Book Reviews		341
News and Notes and Erratum		342
Abstracts		343

No. 5

Diagnosis of Hyperparathyroidism		
<i>Pacita Pronove and Frederic C. Bartter</i>		349
Production of Hypercalciuria by Phosphorus Deprivation on a Low Calcium Intake: A New Clinical Test for Hyperparathyroidism		
<i>Pacita Pronove, Norman H. Bell and Frederic C. Bartter</i>		364
Influence of Chlorothiazide and Hydrochlorothiazide on Serum Pyruvic Acid.	<i>P. Harvey Chase and Stanley L. Wallace</i>	372
Changes in Carbohydrate Metabolism during Blood Loss Shock and Anoxia.	<i>Walter Lyon Bloom and John A. Ward</i>	379
Evaluation of Serum Lipoprotein-PBI Relationships in Females		
<i>Ronald L. Searcy, Lois M. Bergquist and Galal Gough</i>		386
Inhibition of Brain Glutamic Acid Decarboxylase by Phenylalanine, Valine, and Leucine Derivatives: A Suggestion Concerning the Etiology of the Neurological Defect in Phenylketonuria and Branched-Chain Ketonuria.	<i>Richard E. Tashian</i>	393
Metabolic Effects of Infused Triglyceride		
<i>Christine Waterhouse and William H. R. Nye</i>		403
Effects of L-Leucine and Its Metabolites on Glucose Uptake by Rat Diaphragm.	<i>Phyllis Johnson, Betty Herring and James B. Field</i>	415
Preliminary Report: Response of Blood Glucose to Intravenous Salicylate		
<i>Sheldon G. Gilgore and Joseph J. Rupp</i>		419
Abstracts		422

No. 6

Alterations in Fibrinolytic Parameters in the Human During Recovery From Diabetic Acidosis.	<i>Samuel Bellet, Herschel Sandberg, George Tsitouris, Otto Muller and Jean Schraeder</i>	429
Effect of Heparin upon Excretion of Cholesterol End-Products in Man		
<i>Hyman Engelberg</i>		439
Inhibition by Fatty Acids of In Vitro Conversion of Mevalonic Acid-2-C ¹⁴ to Cholesterol.	<i>Eugene R. Fluck and Gordon H. Pritham</i>	444
Hypopituitarism and Diabetes Mellitus: A Case Report with Observa-		

tions on Metabolic Interrelationships	
<i>Norman M. Kaplan, Gerald W. Parker and Steve C. Beering</i>	447
Progressive Resistance to Intravenous Tolbutamide in Pregnancy	
<i>Leon C. Chesley, Peter Kaufmann and Carl Pauerstein</i>	454
Diet as a Factor in the Response of Dog and Man to Tolbutamide Administration	
<i>Bernard R. Landau, Jack R. Leonards, James W. Craig, Charles R. Shepardson, Takeshi Moriwaki and Max Miller</i>	464
Renal Concentrating Ability in Patients with Myxedema	
<i>H. Allan Bloomer, John J. Canary and Laurence H. Kyle</i>	469
Comparison of Analyzed and Calculated Energy Values of Food Intakes of Adult Women	
<i>Helen L. Pilcher, Jane M. Leichsenring, Stephen P. Frommes and Loana M. Norris</i>	475
Serum Acid Phosphatase in Osteogenesis Imperfecta	
<i>Jorgen G. Jacobsen, José A. Pangaro Matienzo, Anne P. Forbes and G. M. Rourke</i>	483
Book Reviews	489
Abstracts	491

No. 7

Dietary Factors Regulating Serum Cholesterol.....	<i>Norman Jolliffe</i>	497
Effect of Diet on Induction of Experimental Porphyria		
<i>James A. Rose, Emanuel S. Hellman and Donald Tschudy</i>		514
Conversion of 1-C ¹⁴ -Acetate to Ketone Bodies in Diabetes		
<i>Walton W. Shreeve and Paul M. Tocci</i>		522
Dynamic Aspects of Adipose Tissue Metabolism: A Review		
<i>Bernard Jeanrenaud</i>		535
Preliminary Report: Aminoaciduria in Representative Neuromuscular Disorders.....	<i>Michael J. Carver, Stephen J. Dutch and Cecil L. Wittson</i>	582
Preliminary Mathematical Model for Glucagon-Induced Hepatic Glycogenolysis in Man.....	<i>Bernardo Leo Wajchenberg, Romulo Ribeiro Pieroni and Gunther Hoxter</i>	585
Abstracts		589

No. 8

Salt and Water Metabolism During Weight Reduction		
<i>Peter Elsbach and Irving L. Schwartz</i>	595	
Observations on the Role of the Adrenal in Electrolyte Response to Surgery.		
<i>Leon J. Marks, Richard Chute, James V. I. O'Sullivan and Thomas J. Giovanniello</i>	610	
Urine Dilution Following Intravenous Water Loading in Edematous States and Hepatic Disease		
<i>Barnett Zumoff, John F. Murray, Audrey Jones and Leonard Brandt</i>	621	
Diurnal Variation of Adrenocortical Function in Non-Endocrine Disease States.		
<i>Leon J. Sholiton, Emile E. Werk, Jr. and Richard T. Marnell</i>	632	
Primary Adrenocortical Insufficiency and Hypogonadotrophic Eunuch-		

oidism.....	<i>Martin Perlmutter, Marvin Numeroff and Theodore Manulkin</i>	647
Changes in Body Composition During First Six Weeks of Life	<i>Joseph R. Christian and Peter J. Talso</i>	653
Abstracts		664
News and Notes		667

No. 9

Continuous Blood Glucose Measurements in Diabetics Given Phenformin Timed-Disintegration Capsules	<i>Charles Weller and Morton Linder</i>	669
Some Effects of Salicylate, Chlorpropamide and Insulin on Carbohydrate Metabolism in Normal and Diabetic Rats.....	<i>Muriel M. Andrews</i>	678
Use of Long-Acting Phenformin (DBI-TD) with Insulin in Insulin-Dependent Diabetes.....	<i>Maximilian Fabrykant and Benjamin I. Ashe</i>	684
Effect of Unrestricted Diet on Diabetes During Therapy with Chlorpropamide.....	<i>Kelly M. West and Else Tophøj</i>	689
Thyroid Proteins in Endemic Goiter	<i>Christian Beckers and Michel De Visscher</i>	695
Preliminary Report: Elevated Levels of Serum Insulin-Like Activity (ILA) as Measured with Adipose Tissue in Early Untreated Diabetes and Prediabetes.....	<i>Jurgen Steinke, Rafael Camerini, Alexander Marble and Albert E. Renold</i>	707
Factors Influencing Oral Glucose Tolerance: Experience with Chronically Ill Patients.....	<i>Arthur Hecht, Shirley Weisenfeld and Martin G. Goldner</i>	712
Purine Metabolism in Blood of Gouty Humans	<i>Charles Bishop, David M. Rankine and John H. Talbott</i>	724
Detection of Congenital Galactosemia and the Carrier State Using Galactose C ¹⁴ and Blood Cells.....	<i>Arnold N. Weinberg</i>	728
Influence of Large Doses of Vitamin D on Magnesium Metabolism in Rats.....	<i>Samir Hanna</i>	735
Book Reviews		744
Abstracts		745
News and Notes		748

No. 10

Pathogenesis of Uremic Acidosis as Indicated by Urinary Acidification on a Controlled Diet	<i>A. P. Briggs, W. H. Waugh and Thomas Findley</i>	749
Acute Effects of Triparanol in Man	<i>David H. Blankenhorn and Oliver Kuzma</i>	763
Phosphate Abnormalities in Hyperparathyroidism	<i>William R. Beisel, Earl S. Gerard, Kevin G. Barry, E. G. Herndon, Jr., William H. Meroney and Laurence H. Kyle</i>	771
Effect of Salicylates on Plasma-Free Fatty Acid in Normal and Dia-		

betic Subjects.....	<i>Lars A. Carlson and Jan Östman</i>	781
Diabetes Mellitus and Cretinism: Report of a Case Free of Complications after 27 Years.....	<i>Seymour M. Glick</i>	788
Total Body Fat and Skinfold Thickness in Children.....	<i>Jana Parizkova</i>	794
Effects of Prior Epinephrine upon Adipose Tissue Sensitivity to Insulin in Vitro.....	<i>P. Riet Correa and E. Magalhaes</i>	808
Effect of Various Substances on Tissue Uptake and Urinary Excretion of Co ⁶⁰ Cyanocobalamin in Rabbits.....	<i>Harold L. Rosenthal</i>	812
Abstracts		820
News and Notes		823

No. 11

Part I of Two Parts

Potassium Dynamics in Cirrhosis of the Liver with Ascites. Distribution of Rubidium ⁸⁶ in Plasma and Red Blood Cells and Total Exchangeable Potassium.....	<i>Nancy Telfer and Franz K. Bauer</i>	825
ACTH-Like Activity in Man of a Synthetic 23 Amino Acid Polypeptide <i>T. S. Danowski, K. Hofmann, H. Yajima and Campbell Moses</i>		835
Iodide Retention in Cardiac Disease <i>G. L. Searle, W. A. Reilly and K. G. Scott</i>		848
Metabolic Effects of Paramethasone Acetate <i>Glenn W. Irwin, Fred H. Priebe and A. S. Ridolfo</i>		852
Interactions in Fat Emulsion—Protein Systems <i>G. E. Mann, M. L. Brown, L. L. DiTrapani and W. S. Singleton</i>		859
Resin Column Chromatography by Dowex 50-X-4 of I ¹³¹ Labeled Iodoamino Acids in Human Serum <i>W. A. Reilly, G. L. Searle and K. G. Scott</i>		869
Electrolyte Distribution in Rats Following Salicylate <i>John S. Charnock, Louis J. Opit and Basil S. Hetzel</i>		874
Effect of Osteolathyrism on Soluble Collagen Fractions of Rat Connective Tissue <i>Waldemar Dasler, Ramon E. Stoner and Russell V. Milliser</i>		883
Abstracts		888

No. 11

Part II of Two Parts

Symposium: Some Recent Advances in the Physiology and Biochemistry of Adrenal Steroids

Grant W. Liddle, Special Editor

Introduction.....	<i>Grant W. Liddle</i>	893
Disorders of ACTH Secretion in Man.....	<i>Don H. Nelson</i>	894
A System for Evaluating the Functional Status of the Adrenal Cortex <i>Ralph I. Dorfman</i>		902
Defects in Steroidal Metabolism of Subjects with Adrenogenital Syndrome.....	<i>Alfred M. Bongiovanni and Walter R. Eberlein</i>	917
Corticosteroid-Binding Globulin: Its Properties and Quantitation <i>William H. Daughaday and Ida Kosak Mariz</i>		936

Some Metabolic Actions of Corticosteroids.....	<i>Stefan S. Fajans</i>	951
Corticosteroid-Tissue Interactions		
<i>Thomas F. Dougherty, David L. Berliner and Martha L. Berliner</i>		966
The Effects of Adrenocortical Steroids upon Antibody Formation		
<i>Philip D. McMaster and Robert E. Franzl</i>		990
On the Role of the Kidney in Control of Adrenal Steroid Production		
<i>Frederic C. Bartter, Alfred G. T. Casper, Catherine S. Delea and</i>		
<i>Jeremy D. H. Slater</i>		1006
Specific and Non-Specific Inhibition of Mineralocorticoid Activity		
<i>Grant W. Liddle</i>		1021

No. 12

Conversion of Plasma Free Fatty Acids into Triglycerides of Plasma		
Lipoprotein Fractions in Man.....	<i>Richard J. Havel</i>	1031
Metabolic Studies in Carcinoid Syndrome: Observations on Use of α -		
Methyl DOPA, Isonicotinic Acid Hydrazide and Selective Trypto-		
phan Deficiency		
<i>Richard B. Davis, Carl S. Alexander and Arnold Adicoff</i>		1035
Excretion of Unconjugated and Conjugated Corticosteroids in Healthy		
Subjects.....	<i>Tetsuo Uete</i>	1045
Excretion of Unconjugated and Conjugated Corticosteroids in Various		
Diseases.....	<i>Tetsuo Uete</i>	1052
Cycloheptolamide and Acetohexamide in Therapy of Diabetes Mellitus		
<i>Marios C. Balodimos, William H. Stimson, Donald C. Tanner,</i>		
<i>James A. Reid and Robert H. Williams</i>		1063
Multiple Congenital Defects in a Twelve Year Old Boy with Cryptor-		
chidism—"Male Turner's Syndrome"		
<i>Walter Futterweit, Mark L. Chapman, Jorge P. Salvaneschi</i>		
<i>and Robert E. Moloshok</i>		1074
Copper Content of Hair and Nails in Wilson's Disease (Hepatolenticular		
Degeneration).....	<i>Eugene W. Rice and Norman P. Goldstein</i>	1085
Electrolyte Balances after a Severe Renal Ischemia in Rats		
<i>Guillermo Latorre and Marco A. Barzallo</i>		1088
Stimulation by Carbutamide and Tolbutamide of Insulin Release from		
Rat Pancreas In Vitro.....	<i>P. R. Bouman and J. H. Gaarenstroom</i>	1095
Serum Acid Phosphatase Response to Starvation and Cortisone Adminis-		
tration in Rats.....	<i>Zvi Laron and Avivah Kowadle</i>	1100
Abstracts		1105

INDEX OF AUTHORS

- Ackerman, N. B., 27
 Adicoff, A., 1035
 Alexander, C. S., 1035
 Altschul, R., 231
 Andrews, M. M., 678
 Ashe, B. I., 684

 Bair, G. O., 261
 Balodimos, M. C., 1063
 Barcena, C., 1
 Barry, K. G., 771
 Bartter, F. C., 349, 364, 1006
 Barzallo, M. A., 1088
 Bauer, F. K., 825
 Beal, J. M., 134
 Beck, J. C., 149
 Beckers, C., 695
 Beering, S. C., 447
 Beigelman, P. M., 162
 Beisel, W. R., 771
 Bell, N. H., 364
 Bellet, S., 429
 Bergquist, L. M., 386
 Berliner, D. L., 966
 Berliner, M. L., 966
 Bishop, C., 724
 Blankenhorn, D. H., 763
 Bloom, W. L., 174, 379
 Bloomer, H. A., 469
 Bongiovanni, A. M., 917
 Bouman, P. R., 1095
 Brandt, L., 621
 Briggs, A. P., 749
 Brown, H., 91
 Brown, J., 91
 Brown, M. L., 859
 Burke, G., 126

 Camerini, R., 707
 Canary, J. J., 469
 Carlson, L. A., 781
 Carver, M. J., 582
 Casper, A. G. T., 1006
 Chapman, M. L., 1074
 Charnock, J. S., 874
 Chase, P. H., 372
 Chesley, L. C., 454
 Christian, J. R., 653
 Chute, R., 610
 Clynes, R., 165
 Cohen, A. M., 50
 Cornell, G. N., 134
 Correa, P. R., 808

 Craig, J. W., 212, 464

 Danowski, T. S., 835
 Dasler, W., 883
 Daughaday, W. H., 936
 Davis, R. B., 1035
 Delea, C. S., 1006
 De Visscher, M., 695
 Dies, F., 1
 DiTrapani, L. L., 859
 Dorfman, R. I., 902
 Dossetor, J. B., 149
 Dougherty, T. F., 966
 Drucker, W. R., 212
 Duncan, G. G., 200
 Dutch, S. J., 582

 Eberlein, W. R., 917
 Elsbach, P., 595
 Engelberg, H., 439

 Fabrykant, M., 684
 Fajans, S. S., 951
 Farrar, W. E., Jr., 204
 Feder, I. A., 246
 Felts, J. H., 183
 Field, J. B., 415
 Findley, T., 204, 749
 Fluck, E. R., 444
 Forbes, A. P., 483
 Franzl, R. E., 990
 Frommes, S. P., 475
 Futterweit, W., 1074

 Gaarenstroom, J. H., 1095
 Garber, S., 115
 Gerard, E. S., 771
 Gilder, H., 134
 Gilgore, S. G., 419
 Giovanniello, T. J., 610
 Glick, S. M., 788
 Goldner, M. G., 712
 Goldstein, N. P., 1085
 Gough, G., 386

 Hanna, S., 735
 Hartwig, Q. L., 41
 Havel, R. J., 1031
 Hayes, D. M., 183
 Hecht, A., 712
 Hellman, E. S., 514
 Herndon, E. G., Jr., 771
 Herring, B., 415

Hetzel, B. S., 874
 Hill, S. R., Jr., 18
 Hofmann, K., 835
 Hoxter, G., 585

Irwin, G. W., 852

Jacobsen, J. G., 483
 Jeanrenaud, B., 535
 Johnson, P., 415
 Jolliffe, N., 497
 Jones, A., 621

Kahn, A., 246
 Kaplan, N. M., 447
 Kaufmann, P., 454
 Kemp, J. A., 204
 Kornel, L., 18
 Kowadle, A., 1100
 Kuzma, O., 763
 Kyle, L. H., 469, 771

Landau, B. R., 464
 Laron, Z., 1100
 Latorre, G., 1088
 Leichenring, J. M., 475
 Leonards, J. R., 464
 Liddle, G. W., 893, 1021
 Linder, M., 669

Magalhaes, E., 808
 Mann, G. E., 859
 Manulkin, T., 647
 Marble, A., 707
 Mariz, I. K., 936
 Marks, L. J., 610
 Marnell, R. T., 632
 Matienzo, J. A. P., 483
 McKerns, K. W., 165
 McMaster, P. D., 990
 Melby, J. C., 75
 Meroney, W. H., 771
 Miller, E. C., Jr., 183
 Miller, J. M., 27
 Miller, M., 212, 464
 Milliser, R. V., 883
 Moloshok, R. E., 1074
 Moody, F. G., 134
 Moriwaki, T., 464
 Moses, C., 835
 Muller, O., 429
 Murray, J. F., 621

Norris, L. M., 475
 Numeroff, M., 647
 Nye, W. H. R., 403

Onoprienko, I. S., 162
 Opit, L. J., 874
 Ostman, J., 781
 O'Sullivan, J. V. I., 610

Parizkova, J., 794
 Parker, G. W., 447
 Pauerstein, C., 454
 Paullada, J. J., 221
 Pena, J. C., 1
 Perlmutter, M., 647
 Pieroni, R. R., 585
 Filcher, H. L., 475
 Priebe, F. H., 852
 Pritham, G. H., 444
 Pronove, P., 349, 364

Radding, R. S., 238
 Rafaelsen, O. J., 99
 Rangel, S., 1
 Rankine, D. M., 724
 Reid, J. A., 1063
 Reilly, W. A., 848, 869
 Renold, A. E., 707
 Rice, E. W., 1085
 Ridolfo, A. S., 852
 Rivera, A., 1
 Rose, J. A., 514
 Rosenthal, H. L., 812
 Rourke, G. M., 483
 Rupp, J. J., 419

Salvaneschi, J. P., 1074
 Sandberg, H., 429
 Schless, G. L., 200
 Schloerb, P. R., 59, 261
 Schraeder, J., 429
 Schwartz, I. L., 595
 Scott, K. G., 848, 869
 Searcy, R. L., 386
 Searle, G. L., 848, 869
 Shepardson, C. R., 464
 Sholiton, L. J., 115, 632
 Shreeve, W. W., 522
 Singleton, W. S., 859
 Slater, J. D. H., 1006
 Smart, T. A., 231
 Smith, R. W., Jr., 27
 Spurr, C. L., 183
 St. Cyr, M., 75
 Steinke, J., 707

Nelson, D. H., 894
 Neuman, W. F., 83

Stimson, W. H., 1063
Stoner, R. E., 883

Talbott, J. H., 724
Talso, P. J., 653
Tanner, D. C., 1063
Tashian, R. E., 393
Telfer, N., 825
Tocci, P. M., 522
Tophøj, E., 689
Tschudy, D., 514
Tsitouris, G., 429
Tu, W. H., 261

Uete, T., 1045, 1052

Venning, E. H., 149
del Villar, J. L., 221

Wajchenberg, B. L., 585
Wallace, S. L., 372
Ward, J. A., 379
Waterhouse, C., 403
Waugh, W. H., 749
Weikel, J. H., Jr.
Weinberg, A. N., 728
Weisenfeld, S., 712
Weller, C., 669
Werk, E. E., Jr., 115, 632
West, K. M., 689
Williams, R. H., 1063
Wittson, C. L., 582
Woodward, H., Jr., 212

Yajima, H., 835

Zimmerman, S. J., 238
Zumoff, B., 621

Index of Subjects

(Page numbers in *italics* refer to abstracts)

Acetate, labeled, conversion to ketone bodies
 in diabetics, 522-534
Acetohexamide, in diabetes, 1062-1073
Acid phosphatase, serum, 1100-1103
 in osteogenesis imperfecta, 482-488
Acidosis
 diabetic
 fibrinolytic activity in, 429-438
 insulin antagonism in, 427
 renal tubular
 familial, 746
 hydrogen ion excretion in, 176
 and hypokalemia, 204-211
 uremic, pathogenesis of, 749-762
ACTH. *See also* Corticosteroids
 corticosteroid excretion after, 1045-1050
 levels
 in adrenal insufficiency, 895
 in Cushing's syndrome, 896-898
 secretion, corticosteroid therapy affecting,
 422, 899-900
 urinary, 94
ACTH-like activity of tricosapeptide, 835-847
Addison's disease
 diabetes with, 891
 and hypogonadotrophic eunuchoidism,
 647-652
 steroid inhibition of vasopressin release in,
 343

Adenoma, islet-cell, 821
Adenosine-triphosphate in hypotension, and
 liver function, 428
Adipose tissue
 carbohydrate metabolism in, 537-543
 fatty acid release from, 564-574
 insulin bio-assay, 162-165
 lipid metabolism in, 324-334, 559-563
 lipogenesis in, 537-543
 metabolism
 dynamic aspects of, 535-581
 and pituitary thyrotropin, 589
 protein metabolism in, 559
 sensitivity to insulin, epinephrine affecting,
 808-811
 sex differences in, 165-170
 triose-phosphate pathways in, 543-559
Adrenals
 aldosterone activity. *See* Aldosterone
 calcium metabolism in hyperadrenocortical
 syndrome, 179
 in Cushing's syndrome. *See* Cushing's
 syndrome
 and electrolyte response to surgery, 610-620
 esterase activity in cortex, 888
 function
 after corticoid therapy, 98
 diurnal variation of, 632-646
 evaluating status of, 902-916

- hyperfunction, and respiratory tract carcinoma, 424
- hyperplasia, and renal tubular acidosis, 204-211
- insufficiency
 - and hypogonadotrophic eunuchoidism, 647-652
 - pseudo-adrenocortical, 272
- pheochromocytoma localization, 179
- and pituitary action, 888
- postpubertal virilism, 98
- and saluretic effect of hydroxyprogesterone, 890
- steroids. *See* Corticosteroids
- and thyroid interrelationships, 27-40
- transplanted, and vena cava constriction, 492
- Adrenalectomy
 - in baboons, corticosteroids affecting, 493
 - in diabetes, 493
 - urine dilution after, 624
- Adrenogenital syndrome, 917-935
- Albumin
 - metabolism, and Cushing's syndrome, 343, 423
 - thyroxine bound to pre-albumin, 423
 - urine dilution in hypoalbuminemia with edema, 622
- Alcoholism, urine dilution in, 623
- Aldosterone
 - carotid artery constriction affecting, 180
 - extracellular fluid volume in aldosteronism, 747
 - hemorrhage affecting secretion, 593
 - and hypertension, 178, 423
 - renal lesions with aldosteronism, 204-211, 1006
 - secondary aldosteronism, 1105
 - sodium and water diuresis after inhibition of synthesis, 178
 - tubular insensitivity to, and salt wasting syndrome, 272
- Aldosterone-like agents, 1022
- Aldosterone-stimulating hormone, 747
- Alkaline phosphatase, serum
 - in renal tubular disease, 176
 - thyroidal control of, 178
- Alkaptonuria, genetic studies of, 665
- Allylisopropylacetamide, porphyria from, 514-521
- Alpha cells, glucagon in, 315-323
- Amino acids
 - deficiency, and liver and kidney changes, 820
 - hyperinsulinism from, 174
 - iodinated, in goiter, 494
- Aminoaciduria, in neuromuscular disorders, 582-584
- Aminonucleoside, effects on cyanocobalamin uptake and excretion, 812-819
- Ammonia
 - blood levels after exercise, 425
 - renal metabolism, 492
- Ammonium chloride, in renal tubular acidosis, 176
- Androgens, and intermediary metabolism, 592
- Androsterone, measurement of, 593
- Anemia, from fat infusions, 41-49
- Angiopathica diabetica, 746
- Angiotensin II, and corticosteroid synthesis, 1010-1014
- Antibodies
 - antithyroid, in mothers of cretins, 97
 - corticosteroids affecting formation, 990-1005
 - thyroglobulin, and exophthalmic goiter, 494
- Arcus lipoides corneae, and atherosclerosis, 175
- Arthropathy, ochronotic, 665
- Ascites
 - aldosterone secretion inhibition in, 178
 - resistant, treatment of, 428
- Ascorbic acid metabolism, 347
- Atherosclerosis, and arcus lipoides corneae, 175
- Bile acid excretion, heparin affecting, 439-443
- Bilirubinemia, corticosteroids affecting, 664
- Biotransformation, 984
- Blood loss. *See* Hemorrhage
- Blood pressure. *See* Hypertension; Hypotension
- Body
 - composition of, in first six weeks, 653-663
 - weight. *See* Weight
- Book reviews
 - British Medical Bulletin. *Insulin* (Young, ed.), 341
 - Calcium Metabolism and the Bone (*Fourman*), 489
 - The Dyslipidoses (*Fleishmajer*), 489
 - Famous Faces in Diabetes (*Striker*), 744
 - Fermente, Hormone, Vitamine und die Beziehungen dieser Wirkstoffe, Zweinander (*Ammon & Dirscherl, eds.*), 489
 - Hypertension. III. Renal, Electrolyte and Autonomic Factors (*Skelton, ed.*), 341

- Medical and Biological Research in Israel, *Prywes, ed.*), 744
- Medizinische Grundlagen Forschung (*Bauer, ed.*), 490
- Brain
- glutamic acid decarboxylase inhibition, 393-402
 - insulin affecting, 103-109
- Bronchitis, and erythrocyte uptake of 1-triiodothyronine, 495
- Bronchogenic carcinoma, diurnal variation of adrenocortical function, 638-640
- Butazolidine, sodium retaining action of, 1025
- BZ 55, *See* Tolbutamide
- Calcium
- balance in triglyceride infusions, 406
 - deprivation in hypoparathyroidism, 270
 - dietary radioactive, skeletal incorporation of, 83-90
 - hypercalciuria
 - from phosphorus deprivation, 364-370
 - and Wilson's disease, 304-314
 - infusions
 - in parathyroid disease, 777
 - and phosphate reabsorption, 347, 426
 - as test for hyperparathyroidism, 349-363
 - metabolism
 - in hyperadrenocortical syndrome, 179
 - paramethasone acetate affecting, 855
- Caloric values of food intakes in women, 475-482
- Capric acid, effects on cholesterol biosynthesis, 444-446
- Carbohydrate metabolism
- in adipose tissue, 537-543, 589
 - in blood loss shock and anoxia, 379-385
 - diabetes affecting, 589
 - glucocorticoids affecting, 951-961
 - insulin affecting, 589
 - salicylates affecting, 678-683
 - serotonin affecting, 344, 423, 665
- Carbon dioxide retention, and erythrocyte uptake of 1-triiodothyronine, 495
- Carbutamine, and insulin release, 1095-1099
- Carcinoid syndrome, 1035-1043
- serotonin synthesis in, 174
- Carcinoma
- bronchogenic, diurnal variation of adrenocortical function, 638-640
 - of endometrium, progestational agents in, 424
 - respiratory tract, and adrenocortical hyperfunction, 424
- Carotid artery constriction, and aldosterone secretion, 180
- Catecholamines
- and O-methyl transferase inhibitors, 346
 - in pheochromocytoma localization, 179
- Children
- body composition changes in first six weeks, 653-663
 - hypoglycemia, leucine-induced, 174
 - skinfold thickness and total body fat, 653-663
 - thyroid hormone metabolism, 177
- Chloroform, effects on cyanocobalamin uptake and excretion, 812-819
- Chlorothiazide, effects on serum pyruvic acid, 372-378
- Chlorpropamide
- and carbohydrate metabolism, 678-683
 - in diabetes, unrestricted diet with, 689-694
- Cholesterol
- and adrenal steroid biosynthesis, 904-906
 - biosynthesis
 - fatty acids affecting, 444-446
 - inhibition of adrenal-steroid production, 493, 592
 - heparin affecting metabolism, 439-443
 - lipoprotein, and PBI values in females, 386-391
 - serum
 - dietary factors in, 497-513
 - in hospital population, 176
 - d-thyroxine affecting, 1107
 - triglyceride infusions affecting, 409-413
 - triparanol affecting, 763-770
 - starvation hypercholesteremia, nicotinic acid in, 231-237
- Chromatography
- paper
 - of serum phenylalanine, 270
 - of urinary corticosteroids, 18-26
 - resin column, for analysis of iodoamino acids, 869-873
- Chromosome
- analysis, in cryptorchidism, 1074-1082
 - complement, in gonadal dysgenesis, 175
- Cirrhosis
- aldosterone secretion inhibition in, 178
 - corticosteroid excretion in, 1055, 1057
 - formiminoglutamic acid excretion in, 891
 - potassium dynamics in, 825-834
 - urine dilution in, 622-623
 - water, sodium and potassium excretion in, 1-17

- Citrate levels, corticosteroids affecting, 957–960
- Citrovorum factor, after gastrectomy, 747
- Clarín, in hyperlipemia, 664
- Collagen, osteolathyrism affecting, 883–887
- Congenital anomalies with cryptorchidism, 1074–1082
- Connective tissue
- fibroblasts and corticosteroid activity, 976–983
 - and osteolathyrism effects on collagen, 883–887
- Copper, in Wilson's disease
- content of hair and nails, 1085–1087
 - estrogens affecting metabolism, 593
 - excretion, 304–314
- Corticosteroids
- ACTH secretion disorders, 894–901. *See also* ACTH
 - ACTH-like activity of tricosapeptide, 835–847
 - and adrenal response to ACTH, 273
 - and antibody formation, 990–1005
 - and bilirubinemia, 664
 - binding by globulin, 936–949
 - biochemistry of, 893
 - of blood, 902–904
 - and cholesterol biosynthesis inhibition, 493, 592
 - in Cushing's syndrome, 180, 592
 - diabetes, steroid, 956
 - diurnal variation of, 632–646
 - effects in depancreatized-adrenalectomized baboons, 493
 - excretion of, 1045–1050
 - in diseases, 1052–1060
 - in pregnancy, after oophorectomy, 1108
 - and fatty acid release from adipose tissue, 567–568, 569–571
 - and fibroblasts, 976–983
 - glucocorticoids. *See* Glucocorticoids
 - inhibiting vasopressin release in Addison's disease, 343
 - kidney role in production of, 1006–1020
 - lipogenic activity of, 330–334
 - lymphocytes as target cells, 971–976
 - metabolic actions of, 951–965
 - mineralocorticoid activity, inhibition of, 1021–1030
 - nonadecapeptide inducing steroidogenesis, 335–338
 - paramethasone acetate, effects of, 852–858
 - physiology of, 893
 - reticuloendothelial cells affecting, 967–971
 - and splanchnic nerve stimulation, 179
 - symposium, 893–1030
 - therapy with
 - ACTH secretion after, 422
 - adrenal function after, 98
 - effects on cyanocobalamin uptake and excretion, 812–819
 - serum acid phosphate response to, 1100–1103
 - and tissue interactions, 966–989
 - and triose-phosphate pathways in adipose tissue, 554–555
 - urinary, chromatography of, 18–26
 - water-soluble esters, 75–82
 - Corticosterone biosynthesis, 907
- Cortisol
- biosynthesis, 907, 912
 - deficiency in adrenogenital syndrome, 923–925
 - interaction with TSH, 27–40
- Cretinism
- and diabetes, 788–793
 - and maternal autoimmunization, 97
 - protein bound iodine values in, 345
- Cryptorchidism, congenital defects with, 1074–1082
- Cushing's syndrome
- and adrenal hyperplasia, 180
 - calcium metabolism in, 179
 - corticosteroids in, 180, 592, 896–898, 1054
 - pituitary–adrenal suppressibility in, 343
 - and serum albumin metabolism, 343, 423
- Cyanocobalamin, labeled, uptake in tissues, 812–819
- Cycloheptolamide, in diabetes, 1062–1073
- Cystic fibrosis, fellowship in, 823
- Dehydroascorbic acid metabolism, 347
- Dehydroepiandrosterone
- biosynthesis of, 906, 907
 - measurement of, 593
- Dehydrogenase, in renal tubular disease, 176
- 2-Deoxy-D-glucose stimulation of islet cells, 822
- Deoxyribonucleic acid of liver, after atocopheryl acetate, 491
- Desmosterolemia, in triparanol therapy, 763–770
- Diabetes
- acetohexamide in, 1062–1073
 - Addison's disease with, 891
 - adrenalectomy in, 493
 - and carbohydrate metabolism, 589
 - corticosteroid excretion in, 1053

- and cretinism, 788-793
 - cycloheptolamide in, 1063-1072
 - diet
 - affecting severity of disease, 426
 - unrestricted, with chlorpropamide therapy, 689-694
 - fibrinolytic activity in acidosis, 429-438
 - glucocorticoids affecting, 960-961
 - and hypopituitarism, 447-453
 - insulin antagonism in acidosis, 427
 - in Jews in Israel, 50-57
 - ketogenesis in, 522-534
 - metahexamide in, 246-260
 - and mucoviscidosis, 891
 - phenethyldiguanide in, 238-245
 - phenformin in, 669-677
 - with insulin, 684-688
 - protein-bound polysaccharides in, 746
 - salicylates affecting, 678-683, 781-787
 - serum insulin-like activity, 707-711
 - serum lipids in, 96
 - steroid, 956
 - tolcyclamide in, 221-230
- Diaphragm, glycogen content, serotonin affecting, 423
- Diet
- caloric values of, 475-482
 - in diabetes
 - and severity of alloxan diabetes, 426
 - unrestricted, and chlorpropamide therapy, 689-694
 - in familial Mediterranean fever, 821
 - and porphyria induction, 514-521
 - rate of ingestion, effects on metabolism, 271
 - reducing diets, 1107
 - and response to tolbutamide, 464-468
 - and serum cholesterol, 497-513
 - and serum triglycerides in South Africa, 425
 - and triose-phosphate pathways in adipose tissue, 549
 - tryptophan-deficient, in carcinoid syndrome, 1035-1043
- Dimercaprol, in Wilson's disease, 304-314
- Dinitrophenol, effects on cyanocobalamin uptake and excretion, 812-819
- Edema, urine dilution in, 621-631
- Electrocardiogram, in thyrotoxicosis, 344
- Electrolytes
- excretion
 - in cirrhosis, 1-17
 - strophanthidin affecting, 96
 - after nephrectomy, 59-74
 - paramethasone acetate affecting, 852-858
 - response to surgery, adrenal in, 610-620
 - salicylates affecting, 874-882
 - tricosapeptide affecting, 840
- Endocrinology and Metabolism, Postgraduate Assembly on, 667, 748
- Endometrial carcinoma, progestational agents in, 424
- Epinephrine
- and adipose tissue sensitivity to insulin, 808-811
 - and fatty acid release from adipose tissue, 565-567
 - in insulin hypoglycemia, 115-125
 - and triose-phosphate pathways in adipose tissue, 549-554
- Erythrocyte uptake of labeled triiodothyronine in abnormalities, 345, 495
- Erythropoiesis, and pituitary gland, 424
- Esterase activity in adrenal cortex, 888
- Estrogens
- and adipose tissue metabolism, 165-170
 - antagonisms, 175
 - biosynthesis of, 908, 909
 - and copper metabolism in Wilson's disease, 593
 - urinary
 - in adrenogenital syndrome, 929
 - pituitary follicle-stimulating hormone affecting, 1108
- Etiocolanolone, measurement of, 593
- Eunuchs
- gonadotropins in, 890
 - hypogonadotrophic, and adrenocortical insufficiency, 647-652
- Exercise, effects on blood ammonia levels, 425
- Exophthalmic goiter, and antibodies to thyroglobulin, 494
- Familial conditions
- histidine metabolism disorders, 1106
 - porphyria, 1106
- Fanconi syndrome, strontium therapy, 1107
- Fat
- body. *See* Weight
 - emulsion infusions, metabolic effects of, 41-49, 403-414, 859-868
- Fatty acids
- metabolism in adipose tissue, 560, 564-574
 - and mevalonic acid metabolism, 444-446
 - nonesterified, after hypoglycemia, sympathetic blockade affecting, 115-125
 - plasma, conversion of, 1031-1033

- salicylates affecting, 781-787
- Fever, etiocholanolone, 593
- Fibrinolytic activity, in diabetic acidosis, 429-438
- Fibroblasts, and corticosteroid activity, 976-983
- Fibrosarcoma
 - hypoglycemia with, 820
 - massive retroperitoneal, 200-203
- Fluids, extracellular volume in aldosteronism, 747
- Folic acid
 - activity in liver, 347
 - metabolism after gastrectomy, 747
- Formiminoglutamic acid excretion in cirrhosis, 891
- Galactosemia, detection of, 728-734
- Gastrectomy, folic acid metabolism and citrovorum factor after, 747
- Globin peptides, in hemoglobin synthesis, 91-93
- Glucagon
 - and liver glycogen disease, 491
 - liver glycogenolysis from, model for, 585-588
 - metabolic effects of, 271, 272
 - and plasma lipid levels, 315-323
- Glucocorticoids
 - and carbohydrate metabolism, 951-961
 - and diabetes, 960-961
 - and lipid metabolism, 962
 - and triose-phosphate pathways in adipose tissue, 555-557
- Glucosamine, serum, in diabetes, 746
- Glucose
 - blood levels
 - in diabetes. *See* Diabetes
 - salicylates affecting, 419-421, 679
 - glycemic effect of serotonin, 344
 - hepatic output, insulin affecting, 212-220
 - hyperglycemia, thiazide-induced, 372-378.
See also Diabetes
 - hypoglycemia
 - amino acid-induced, 174
 - diagnostic value of tolbutamide, 591
 - fibrosarcoma with, 200-203, 820
 - leucine affecting, 415-418, 821
 - with mesodermal tumors, 183-199
 - sympathetic blockade affecting blood substances in, 115-125
 - tolbutamide mechanisms, 275-289, 290-303
 - metabolism
 - in blood loss shock and anoxia, 379-385
 - and lipogenesis, 541-543
 - tolerance
 - corticosteroids affecting, 957-960
 - oral, factors of, 712-723
 - tricosapeptide affecting, 839
 - utilization of, metal ions affecting, 1107
- Glucose-6-phosphatase, salicylates affecting, 680
- Glutamic acid decarboxylase, in brain, inhibition of, 393-402
- Glycogen
 - contents of tissues, serotonin affecting, 423
 - metabolism
 - in blood loss shock and anoxia, 379-385
 - in liver glycogen disease, 491
- Glycogenolysis, hepatic, glucagon-induced, model for, 585-588
- Goiter. *See* Thyroid
- Gonad
 - development, 95
 - dysgenesis, growth hormone in, 175
 - female, steroids affecting, after hypophysectomy, 273
- Gonadotrophic eunuchoidism, and adrenocortical insufficiency, 647-652
- Gonadotropins, studies of, 890
- Gout
 - and hemoglobin level in cardiac and respiratory disease, 426
 - purine metabolism in blood, 724-727
- Growth hormone
 - and fatty acid release from adipose tissue, 568-569
 - metabolic effects of, 422
 - plasma level in gonadal dysgenesis, 175
 - and triose-phosphate pathways in adipose tissue, 554-555
- Guanethidine, in hyperthyroidism, 889
- Hair, copper content of, in Wilson's disease, 1085-1087
- Hashimoto's thyroiditis, 889
- Heart
 - failure, urine dilution in, 622
 - glycogen content, serotonin affecting, 423
 - hemoglobin levels in gout with disease, 426
 - iodide retention in disease, 848-851
- Hemoglobin
 - fat infusions affecting, 41-49
 - globin peptides in synthesis, 91-93
 - in gout with cardiac and respiratory disease, 426

- in pregnancy, and iron deficiency, 425
- Hemorrhage
and aldosterone secretion, 593
blood ketones in, 171-173
carbohydrate metabolism in, 379-385
- Heparin
buccal, in hyperlipemia, 664
effects on cholesterol metabolism, 439-443
- Hepatic conditions. *See* Liver
- Hepatolenticular degeneration. *See* Wilson's disease
- Hermaphroditism, 95
- Histidine metabolism, familial disorders of, 1106
- Hodgkin's disease, uric acid excretion in, 745
- Hormones, 422-425, 589-594. *See also* specific hormones
- Hurler's syndrome, 745
- Hydrocortisone. *See* Cortisol
- Hydrogen ion excretion in renal tubular acidosis, 176
- 17-Hydroxycorticosteroids. *See also* Corticosteroids
excretion of, 1045-1050
in diseases, 1052-1060
plasma, in hypoglycemia, 115-125
- 5-Hydroxyindoleacetic acid excretion, in carcinoid syndrome, 1035-1043
- 11-b-Hydroxylase inhibitor, in therapy of ascites, 428
- Hydroxyprogesterone, as salt-losing steroid, 890
- Hydroxyproline, urinary, 748
- 5-Hydroxytryptophan
decarboxylase inhibition, in carcinoid syndrome, 1035-1043
urinary, and serotonin synthesis, 174
- Hypertension
and adrenogenital syndrome, 930
and aldosterone, 178, 423
malignant, methimazole in, 890
- Hypophysis. *See* Pituitary
- Hypotension, adenosine-triphosphate in, and liver function, 428
- Infants, body composition of, 653-663
- Insulin
and adipose tissue
bio-assay, 162-165
epinephrine affecting sensitivity to, 808-811
fatty acid release, 564-565
glucose uptake, 538-541
triose-phosphate pathways, 543-549
antagonism in diabetics in acidosis, 427
and carbohydrate metabolism, 589, 678-683
and central nervous system, 99-114
in diabetes. *See* Diabetes
and fibrinolysis, 436
glucocorticoids affecting sensitivity to, 952
and hepatic glucose metabolism, 215-220, 275-289
hypoglycemia from, sympathetic blockade affecting blood substances in, 115-125
metal ions affecting activity of, 1107
phenformin in, in diabetes, 684-688
plasma activity after BZ 55, 821
in plasma, immunoassay of, 94
potentiating action of tolbutamide, 427
sulfonyleureas stimulating release of, 1095-1099
tricosapeptide affecting tolerance, 839
- Insulin-like activity
in plasma, in fibrosarcoma with hypoglycemia, 820
in serum, in diabetes, 707-711
- Iodide retention in cardiac disease, 848-851
- Iodine. *See also* Thyroid metabolism
in Hashimoto's thyroiditis, 889
in pregnancy, 888
protein bound, in thyroid disorders, 345
- Iodoacetate, effects on cyanocobalamin uptake and excretion, 812-819
- Iodoamino acids, chromatography for analysis of, 869-873
- Iron, plasma, and hemoglobin levels in pregnancy, 425
- Ischemia, renal, electrolyte balance after, 1088-1094
- Islet cells
adenoma, 821
stimulation by 2-DG, 822
- Isonicotinic acid hydrazide, in carcinoid syndrome, 1035-1043
- Israel, diabetes in, 50-57
- Jewish groups, diabetes in, 50-57
- Jolliffe, Norman H., obituary, 824
- a-Keto-acid induced hyperinsulinism, 174
- a-Ketoglutarate levels, corticosteroids affecting, 957-960
- Ketone bodies, in diabetes, 493, 522-534
- Ketones, blood, in hemorrhage and shock, 171-173

- Ketonuria, branched-chain, and brain glutamic acid decarboxylase activity, 393-402
- Ketosis, after hypoglycemia, sympathetic blockade affecting, 115-125
- Kidney
and adrenal steroid production, 1006-1020
aldosterone-stimulating hormone in, 747
in amino acid deficiency, 820
ammonia metabolism, 492
concentrating ability in myxedema, 469-474
cyanocobalamin uptake, 812-819
glomerular enzymatic activity, 176
insufficiency, and erythrocyte uptake of 1-triiodothyronine, 495
ischemia, electrolyte balance after, 1088-1094
nephron histochemistry, 176
parathyroidectomy affecting, 1105
phosphate transport in disease, 594
pyelonephritis and potassium depletion, 747
transplanted, and vena cava constriction, 492
tubular acidosis
familial, 746
hydrogen ion excretion in, 176
and hypokalemia, 204-211
tubular disease, alkaline phosphatase and lactic dehydrogenase in, 176
tubular insensitivity to aldosterone, and salt wasting syndrome, 272
tubular phosphate reabsorption in hyperparathyroidism, 349-363
uremic acidosis pathogenesis, 749-762
urine dilution in disease, 622
water, sodium and potassium excretion in cirrhosis, 1-17
- Klinefelter's syndrome, 95
- Lactate, blood levels, serotonin affecting, 665
- Lactic acid metabolism, in blood loss shock and anoxia, 379-385
- Lactic dehydrogenase, in renal tubular disease, 176
- Lathyrism, effects on collagen, 883-887
- Lauric acid, effects on cholesterol biosynthesis, 444-446
- Leucine
effects on brain glutamic acid decarboxylase, 393-402
effects on glucose uptake, 415-418
effects in hypoglycemia, 174, 821
purine metabolism in, 745
- Lipemia
in diabetes after adrenalectomy, 493
idiopathic hyperlipemia, 427
postprandial, buccal heparin affecting, 664
- Lipids
in adipose cells, 324-334
metabolism
in adipose tissue, 559-563, 589
adrenocortical hormones affecting, 330-334
glucocorticoids affecting, 962
plasma
glucagon affecting, 315-323
in triglyceride infusions, 406-410
serum
in diabetes, 96
and serum lipoprotein-PBI relationships in females, 386-391
tricosapeptide affecting, 841-843
- Lipogenesis, in adipose tissue, 537-543
- Lipoproteins, plasma, triglycerides in, 1031-1033
- Liver
and adenosine-triphosphate in hypotension, 428
in amino acid deficiency, 820
anabolic steroids affecting function tests, 664
cirrhosis
formiminoglutamic acid excretion in, 891
potassium dynamics in, 825-834
water, sodium and potassium excretion in, 1-17
corticosteroid excretion in disease, 1055
cyanocobalamin uptake, 812-819
folic acid activity in, 347
glucagon-induced glycogenolysis, model for, 585-588
glucose output
insulin affecting, 212-220
tolbutamide affecting, 275-289, 290-303
glycogen content, serotonin affecting, 423
glycogen disease, 491
metabolism in shock, 379-385
reticuloendothelial cells and corticosteroid metabolism, 969-971
a-tocopheryl acetate affecting, 491
and tolbutamide hypoglycemia mechanisms, 275-289, 290-303
tumor, mesodermal, and spontaneous hypoglycemia, 183-199
urine dilution in disease, 621-631

- in Vitamin E deficiency, 428
- Lungs, function in hyperthyroidism, 590
- Lupus erythematosus, potassium levels in, 426
- Lymphocytes, as corticosteroid target cells, 971-976
- Lymphoid tissue, cortisone affecting, 997-998
- Lymphoma, malignant, uric acid excretion in, 745
- Magnesium
 - ions affecting glucose utilization, 1107
 - levels after salicylates, 874-882
 - vitamin D affecting metabolism, 735-743
- Mammary glands, nucleic acid in, 746
- Maple syrup urine disease, and brain glutamic acid decarboxylase activity, 393-402
- Mediterranean fever, familial, diet in, 821
- Metahexamide, in diabetes, 246-260
- Metal ions affecting glucose utilization, 1107
- Methimazole, in hypertension, malignant, 890
- a-Methyl dopa, in carcinoid syndrome, 174, 1035-1043
- O-Methyl transferase inhibitors, 346
- Mevalonic acid metabolism, fatty acids affecting, 444-446
- Micellophagosis, 981
- Mineralocorticoid activity, inhibition of, 1021-1030
- Mucopolysaccharides, inherited disorders of metabolism, 745
- Mucoviscidosis, and diabetes, 891
- Muscular disorders
 - aminoaciduria in, 583-584
 - triamcinolone myopathy, 426
- Myristic acid, effects on cholesterol biosynthesis, 444-446
- Myxedema
 - hyperuricemia in, 269
 - renal concentrating ability in, 469-474
- Nails, copper content of, in Wilson's disease, 1085-1087
- Neoplasms. *See* Tumors
- Nephrectomy
 - metabolic changes after, 59-74
 - uremic syndrome after, and induced thyroid disorders, 261-268
- Nephritis. *See* Kidney
- Nerves
 - splanchnic nerve stimulation and adreno-
 - cortical secretion, 179
 - thyrocarotid arterial junction denervation, and aldosterone secretion, 180
- Nervous system
 - central
 - defects in ketonurias, 393-402
 - insulin affecting, 99-114
 - malfunction of, and hyponatremia, 346
 - and lipid metabolism of adipose tissue, 324-334
 - sympathetic blockade, effects of, 115-125
 - Neurohumoral regulation of thyroid hormone secretion, 494
- Neuromuscular disorders, aminoaciduria in, 582-584
- Nicotinic acid, in starvation hypercholesteremia, 231-237
- Nitrogen balance, in triglyceride infusions, 405
- Nitrogenous blood constituents, after nephrectomy, 59-74
- Nucleic acid in mammary glands, 746
- Obesity. *See also* Adipose tissue; Weight
 - reducing diets in, 1107
 - salt and water metabolism in weight reduction, 595-609
- Ochronotic arthropathy, 665
- Oligophrenia phenylpyruvica, tryptophan metabolism in, 271
- Oophorectomy in pregnancy, 1108
- Osteogenesis imperfecta, serum acid phosphatase in, 483-488
- Osteolathyrism, effects on collagen, 883-887
- Oxalate biosynthesis, 96
- Oxygen
 - carbohydrate metabolism in anoxia, 379-385
 - salicylates affecting consumption, 874-882
- Pancreas
 - depancreatized baboons, corticosteroids affecting, 493
 - glucagon in alpha cells, 315-323
 - islet cells
 - adenoma, 821
 - stimulation by 2-DG, 822
 - in vitamin E deficiency, 428
- Pantothenol, 1105
- Paralysis, hypokalemic, and renal tubular acidosis, 204-211
- Paramethasone acetate, metabolic effects of, 852-858

- Parathyroid gland
calcium deprivation in hypoparathyroidism, 270
diagnosis of hyperparathyroidism, 349-363
kidney function after parathyroidectomy, 1105
new test for hyperparathyroidism, 364-371
phosphate exchange in hyperparathyroidism, 594
phosphate excretion in hyperparathyroidism, 771-780
- Parathyroid hormone, 666
- Penicillamine, in Wilson's disease, 304-314
- Pentose metabolism, in pentosuria, 1106
- Peptides
adrenocorticotrophic activity of synthetic nonadecapeptide, 335-338
globin, in hemoglobin synthesis, 91-93
polypeptide from acetone-dried post-pituitary glands, 888
tricosapeptide, ACTH-like activity of, 835-847
- Phenethylguanide. *See* Phenformin
- Phenformin
in diabetes, 669-677
with insulin, 684-688
hypoglycemic efficacy of, 238-245
- Phenylalanine
chromatography of, in phenylketonuria, 270
inhibiting brain glutamic acid decarboxylase, 393-402
- Phenylketonuria
and brain glutamic acid decarboxylase activity, 393-402
chromatography of serum phenylalanine, 270
tryptophan metabolism in, 271
- Pheochromocytoma localization, 179
- Phloridzin, effects on cyanocobalamin uptake and excretion, 812-819
- Phosphatase
acid
in osteogenesis imperfecta, 483-488
serum activity of, 1100-1103
alkaline
in renal tubular disease, 176
thyroidal control of, 178
- Phosphate
in hyperparathyroidism, 594, 771-780
reabsorption
calcium infusion affecting, 347, 426
as tests for hyperparathyroidism, 349-363
transport in renal disease, 594
- Phospholipids, blood, triparanol affecting, 763-770
- Phosphorus
balance in triglyceride infusions, 406
deprivation test for hyperparathyroidism, 364-371
paramethasone acetate affecting metabolism, 857
renal tubular reabsorption, after parathyroidectomy, 1105
- Phytate sodium in diagnosis of hypoparathyroidism, 270
- Pineal extracts, adreno-glomerulotropic activity of, 888
- Pituitary
and aldosterone secretion after hemorrhage, 593
carbohydrate metabolism, 589
corticosteroid levels in Cushing's disease, 592, 896-898
corticotropin-releasing factor, 888
and erythropoiesis, 424
follicle-stimulating hormone affecting urinary estrogens, 1108
and a-globulin increase, 422
hypopituitarism and diabetes, 447-453
post-hypophyseal test of thyroid function, 269
pregnancy, hypophysectomy in, 1107
steroids affecting gonads after hypophysectomy, 273
suppressive agents in Cushing's syndrome, 343
thyrotropin, 589
vasopressin release from, in Addison's disease, 343
- Plasma
fatty acids, conversion of, 1031-1033
insulin, activity after BZ 55, 821
insulin-like activity, in fibrosarcoma with hypoglycemia, 820
- Polysaccharides, protein-bound, in diabetes, 746
- Porphyria
cutaneous, 491
familial studies, 1106
induction of, diet affecting, 514-521
- Potassium
balance after renal ischemia, 1088-1094
depletion, and pyelonephritis, 747
dynamics in cirrhosis, 1-17, 825-834

- exchangeable, in infants, 657
- metabolism, paramethasone acetate affecting, 854
- postoperative excretion, adrenal role in, 610-620
- renal tubular acidosis and hypokalemia, 204-211
- salicylates affecting levels, 874-882
- Prednisolone, and electrolyte response to surgery, 610-620
- Pregnancy
 - in diabetes, and pituitary necrosis, 450
 - hemoglobin levels in, and iron deficiency, 425
 - hypophysectomy in, 1107
 - and iodine metabolism, 888
 - maternal autoimmunization and cretinism, 97
 - nucleic acid in mammary glands, 746
 - oophorectomy in, 1108
 - resin sponge uptake of labeled triiodothyronine in, 345
 - resistance to tolbutamide in, 454-463
- Pregnanetriol excretion, in adrenogenital syndrome, 925-929
- Pregnenolone biosynthesis, 905
- Progesterone
 - in carcinoma of endometrium, 424
 - and mineralocorticoid activity, 1023
 - and nucleic acid in mammary glands, 746
- Prolactin
 - and nucleic acid in mammary glands, 746
 - and triose-phosphate pathways in adipose tissue, 555
- Protein
 - bound polysaccharides, in diabetes, 746
 - corticosteroid-binding globulin, 936-949
 - a-globulin increase, pituitary affecting, 422
 - metabolism
 - in adipose tissue, 559
 - glucocorticoids affecting, 961-962
 - paramethasone acetate affecting, 856
 - serum
 - fat emulsions affecting, 859-868
 - thyroxine binding by, 97
 - thyroid, in goiter, 695-706
 - thyroxine bound to pre-albumin, 423
- Pseudo-adrenocortical insufficiency, 272
- Pseudohermaphroditism, 95
 - female, 917-935
- Pteridine, and mineralocorticoid activity, 1027
- Puberal hypothyroidism, 126-133
- Pulmonary function in hyperthyroidism, 590
- Purine metabolism
 - in blood of gouty patients, 724-727
 - in neoplastic diseases, 745
- Pyelonephritis
 - and hypokalemia with renal acidosis, 204-211
 - and potassium depletion, 747
- Pyrogenic steroids, 593
- Pyruvate blood levels, corticosteroids affecting, 957-960
- Pyruvic acid, serum, chlorothiazide affecting, 372-378
- Radiation, effects on cyanocobalamin uptake and excretion, 812-819
- Recklinghausen's disease, metabolic studies of, 183-199
- Renal conditions. *See* Kidney
- Renin, and corticosteroid synthesis, 1006, 1009
- Reserpine, effects on thyroxine metabolism, 590
- Respiratory disease, hemoglobin levels in gout with, 426
- Respiratory metabolism of adipose tissue, 589
- Respiratory tract carcinoma, and adrenocortical hyperfunction, 424
- Reticuloendothelial cells, in steroid biosynthesis, 967-971
- Riboflavin deficiency, and tryptophan metabolism, 665
- Rickets, vitamin D-resistant, 347, 426
- Rubidium, as tracer in potassium studies, 825-834
- Salicylates
 - effects on blood glucose, 419-421
 - effects on carbohydrate metabolism, 678-683
 - effects on fatty acids, 781-787
 - electrolyte distribution after, 874-882
- SC-5233, and mineralocorticoid activity, 1024
- SC-8109, and mineralocorticoid activity, 1025
- SC-9420, and mineralocorticoid activity, 1025
- Serotonin
 - and carbohydrate metabolism, 344, 423
 - in carcinoid syndrome, 174, 1035, 1043
 - glycemic effect of, 344
 - and glycogen contents in tissues, 423

- and lactate blood levels, 665
- and thyroxine metabolism, 590
- Serum
 - acid phosphatase, 1100-1103
 - in osteogenesis imperfecta, 483-488
 - alkaline phosphatase
 - in renal tubular disease, 176
 - thyroidal control of, 178
 - cholesterol, d-thyroxine affecting, 1107
 - insulin-like activity, 707-711
 - pyruvic acid, chlorothiazide affecting, 372-378
- Sexual abnormalities, 95
- Shock
 - blood ketones in, 171-173
 - carbohydrate metabolism in, 379-385
- Skinfold thickness in children, and total body fat, 794-807
- Sodium
 - adrenogenital syndrome, salt-losing, 931
 - balance after renal ischemia, 1088-1094
 - deprivation, and aldosterone excretion, 423
 - diuresis after inhibition of aldosterone synthesis, 178
 - exchangeable, in infants, 655-657
 - excretion
 - butazolidine affecting, 1025
 - in cirrhosis, 1-17
 - hydroxyprogesterone as salt-losing steroid, 890
 - hyponatremia
 - and malfunction of central nervous system, 346
 - and vena cava obstruction, 149-161
 - metabolism
 - paramethasone acetate affecting, 854
 - in weight reduction, 595-609
 - postoperative retention, adrenal role in, 610-620
 - salicylates affecting levels, 874-882
 - wasting syndrome in tubular insensitivity to aldosterone, 272
- Spinal cord, insulin affecting, 109-111
- Spirolactones, 1024-1027
 - and electrolyte response to surgery, 610-620
- Splanchnic nerve stimulation, and adrenocortical secretion, 179
- Splanchnomegaly, and retroperitoneal fibrosarcoma, 200-203
- Starvation
 - and hypercholesteremia, nicotinic acid in, 231-237
 - serum acid phosphatase response to, 1100-1103
- Steroids
 - adrenal. *See* Corticosteroids
 - anabolic, and liver function tests, 664
 - effects on female gonads after hypophysectomy, 273
 - Hormonal, International Congress on, 667, 748, 823
 - pyrogenic, 593
- Sterols
 - heparin affecting excretion of, 439-443
 - triparanol affecting, 763-770
- Stratton, Henry M., 339-340
- Strontium therapy, in Fanconi syndrome, 1107
- Strophanthidine, and electrolyte excretion, 96
- SU-4885, in ascites, 428
- Sulfonylureas in diabetes, 1062-1073. *See also specific agents*
- Surgery
 - electrolyte response to, adrenal in, 610-620
 - weight loss in patients, 134-148
- Sympathetic blockade, effects of, 115-125
- Testicular histology in cryptorchidism, 1074-1082
- Testosterone biosynthesis, 907, 912
- Thioctic acid, serum levels of, 820
- Thiouracil, effects on cyanocobalamin uptake and excretion, 812-819
- Thyrocarotid arterial junction denervation, and aldosterone secretion, 180
- Thyroglobulin, 695-706
 - antibodies, and eye signs in goiter, 494
- Thyroid
 - and adrenal interrelationships, 27-40
 - and alkaline phosphatase serum levels, 178
 - chromatography for analysis of iodoamino acids, 869-873
 - corticosteroid excretion in disease, 1053
 - diabetes and cretinism, 788-793
 - electrocardiogram in hyperthyroidism, 344
 - and fatty acid release from adipose tissue, 571-572
 - function test, 590
 - goiter, therapy of, 177
 - guanethidine in hyperthyroidism, 889
 - Hashimoto's thyroiditis, 889
 - hormone metabolism in children, 177

- hormone secretion, neurohumoral regulation of, 494
- hyperuricemia in myxedema, 269
- induced disorders, and uremic syndrome after nephrectomy, 261-268
- iodinated amino acids in goiter, 494
- iodine metabolism in nontoxic goiter, 177
- iodine retention in cardiac disease, 848-851
- and lipid metabolism, 386-391
- maternal autoimmunization and cretinism, 97
- post-hypophyseal test of function, 269
- propylthiouracil and iodine metabolism, 269
- protein bound iodine values in diseases, 345
- proteins in goiter, 695-706
- puberal hypothyroidism, 126-133
- pulmonary function in hyperthyroidism, 590
- renal concentrating ability in myxedema, 469-474
- resin sponge uptake of labeled triiodothyronine in diseases, 345
- thyroglobulin antibodies and exophthalmic goiter, 494
- thyrotrophin releasing principle from urine, 98
- thyroxine analogues attached to proteins, 270
- and triose-phosphate pathways in adipose tissue, 557-559
- Thyrotropin
 - antisera preparations, 591
 - interaction with cortisol, 27-40
 - pituitary, 589
- Thyroxine
 - binding by serum proteins, 97
 - bound to pre-albumin, 423
 - and cyanocobalamin uptake and excretion, 812-819
 - and serum cholesterol, 1107
 - tryptophane metabolites affecting metabolism, 590
- a-Tocopheryl acetate, metabolic effects of, 491
- Tolbutamide
 - in diabetes with Addison's disease, 891
 - diagnostic value in hypoglycemia, 591
 - diet factor in response to, 464-468
 - glucocorticoids affecting sensitivity to, 952
 - hypoglycemia from, mechanisms of, 275-289
 - insulin potentiating action of, 427
 - and insulin release, 1095-1099
 - plasma insulin activity after, 821
 - resistance to, in pregnancy, 454-463
 - site of action in dog, 290-303
- Tolcyclamide, in diabetes, 221-230
- Transcortin, 936-949
- Triamcinolone myopathy, 426
- Tricosapeptide, ACTH-like activity of, 835-847
- Triglycerides
 - blood
 - diet affecting, 425
 - heparin affecting, 439-443
 - triparanol affecting, 763-770
 - infused, metabolic effects of, 403-414
 - metabolism in adipose tissue, 561-563
 - in plasma lipoprotein fractions, 1031-1033
- 1-Triiodothyronine, erythrocyte uptake in disease, 495
- Triparanol
 - acute effects of, 763-770
 - and adrenal steroid production, 493
- Tryptophan
 - deficiency diet, in carcinoid syndrome, 1035-1043
 - effects on thyroxine metabolism, 590
 - 5-hydroxytryptophan
 - decarboxylase inhibition, in carcinoid syndrome, 1035-1043
 - urinary, and serotonin synthesis, 174
 - metabolism
 - in oligophrenia phenylpyruvica, 271
 - in riboflavin deficiency, 665
- Tuberculosis, corticosteroid excretion in, 1056
- Tumors. *See also* Carcinoma; Fibrosarcoma
 - mesodermal, spontaneous hypoglycemia with, 183-199
 - purine metabolism in, 745
 - zinc metabolism of, 96
- Turner's syndrome, 175
 - male, 1074-1082
- Uremia
 - after nephrectomy
 - and induced thyroid disorders, 261-268
 - metabolic change in, 59-74
 - pathogenesis of acidosis, 749-862
- Uric acid
 - excretion in malignant lymphoma, 745
 - myxedema and hyperuricemia, 269
- Urine
 - corticosteroids in, chromatography of, 18-26
 - dilution in edema and hepatic disease, 621-631

- hydroxyproline in, 748
 - thyrotrophin releasing principle from, 98
- Uterine carcinoma, progestational agents in, 424
- Vaginal smear, pituitary follicle-stimulating hormone affecting, 1108
- Valine, inhibiting brain glutamic acid decarboxylase, 393-402
- Vasopressin release, from neurohypophysis in Addison's disease, 343
- Vena cava
 - constriction, kidney and adrenal transplants affecting, 492
 - obstruction, and hyponatremia, 149-161
- Virilism, adrenal, 98
- Virilization syndrome, 917-935
- Vitamin B₁₂ uptake of labeled cyanocobalamin in tissues, 812-819
- Vitamin D
 - and magnesium metabolism, 735-743
 - rickets resistant, 347, 426
- Vitamin E
 - deficiency, digestive organ lesions in, 428
 - and liver DNA content, 491
- Von Recklinghausen's disease, metabolic studies of, 183-199
- Water
 - diuresis after inhibition of aldosterone synthesis, 178
 - excretion in cirrhosis, 1-17
 - intravenous loading, urine dilution after, 621-631
 - metabolism in weight reduction, 595-609
 - total body
 - neonatal, 655
 - after nephrectomy, 59-74
- Weight
 - loss of
 - after reducing diets, 1107
 - salt and water metabolism in, 595-609
 - in surgical patients, 134-148
 - neonatal, 654-655
 - and skinfold thickness in children, 794-807
 - after triglyceride infusions, 404
- Wilson's disease
 - and copper content of hair and nails, 1085-1087
 - copper metabolism in, estrogens affecting, 593
 - and hypercalcuria, 304-314
 - therapy of, 95
- Zinc metabolism of tumor, 96

Notes to Contributors

Original Communications. Manuscripts for publication, letters and all other editorial communications should be addressed to the Editor-in-Chief, at the address given on page iv. Articles are accepted for publication on the condition that they are contributed solely to this Journal. Contributors should bear in mind the nature of the Journal, i.e., articles should have a definite metabolic application, with case reports submitted only if they include controlled observations of an exceptionally revealing nature. Papers should be as brief as possible, consistent with the subject.

The original copy and one duplicate should be submitted (tables and figures also to be submitted, if possible, in duplicate). Contributions should include a page giving the authors' degrees and hospital and academic affiliations for use at the end of the article, and an address for mailing proofs.

Preliminary Reports. Contributors are encouraged to submit articles in a special short form to be known as a "Preliminary Report," with the understanding that if such an article is accepted it will be printed in the next available issue, regardless of the backlog of regular articles. A "Preliminary Report" can serve as a preliminary report on work just completed, or may be a final report or an observation which does not require a lengthy write-up. To qualify for the priority given a Preliminary Report the article must not exceed 1000 words including the bibliography and can have no more than one simple table or small figure. If a figure or table is included the author should cut the 1000 words allowance by an amount sufficient to allow for the space which will be taken up by the table or figure, as no Preliminary Report may take up more than two pages in the Journal. Despite the limitations on length, data to support the conclusions stated should be included to the extent necessary.

Manuscripts should be typewritten on good quality paper, one side of the page only, with double or triple spacing and

liberal margins throughout. Handwritten manuscripts, single-spaced material, and excessive interlineated corrections are unacceptable. References to the literature should follow the style of the Journal and be compiled at the end of the article in numerical sequence.

Illustrations and Tables. Position of figures and tables in the text should be marked on manuscript. **METABOLISM** uses arabic rather than roman numbering. Figures should carry their number and the author's name on the back; figure legends should be compiled in a separate list. To ensure clear reproduction, all copy for zinc cuts, including pen drawings and charts, should be prepared with black india ink, and a black ribbon should be used for typewritten material; for half-tone work, good photographic prints or the original drawings should be supplied. Graphs should be drawn on plain white or blue-lined graph paper. Tables and illustrations should be of a size easily handled, and for all illustrations the effect of possible reduction in size to fit the Journal page should be considered.

Four illustrations and a total of one and one-half printed pages of tables are allowed gratis per article, with the contributor bearing the cost in excess of these limits; excessive engravings are charged for at \$10.00 each, excessive tables at about \$20.00 per page. The contributor must likewise bear all costs connected with printing color plates.

Proofreading. Contributors are provided with galley proofs and are asked to proofread them for typesetting errors. Important changes in data are allowed within reason without cost, but excessive alterations and additions must be charged to the contributor.

Reprints. Reprints of articles will be furnished to contributors when ordered in advance of publication. An order form, showing cost of reprints, is sent with proofs. Individual reprints of an article can usually be obtained by writing directly to its author at the address given at the end of the article.

